

Notice of Allowability

Application No.

09/749,660

Examiner

Tuan V. Thai

Applicant(s)

KHARE ET AL.

Art Unit

2186

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

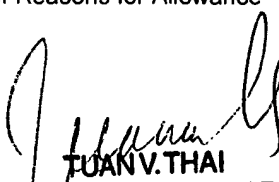
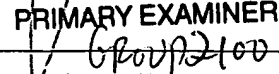
1. ☒ This communication is responsive to amendment filed 12/28/2006.
2. ☒ The allowed claim(s) is/are 1-6, 8-27 and 29 renumbered as 1-27 respectively.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


TUAN V. THAI
PRIMARY EXAMINER


Application/Control Number: 09/749,660

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Attorney's Docket No.: 2207/9865

**IN THE UNITED STATES PATENT AND
TRADEMARK OFFICE**

In re application of: Khare et al. **Group:** 2186
Serial No.: 09/749,660 **Examiner:** Tuan Thai
For: ***METHOD AND APPARATUS FOR REDUCING MEMORY LATENCY IN A
CACHE COHERENT MULTI-NODE ARCHITECTURE.***

1. This action is responsive to amendment filed December 28, 2006. Claims 7 and 28 have been cancelled. Claims 1-6, 8-27 and 29 are now allowed.

REASONS FOR ALLOWANCE

2. The following is an Examiner's Statement of Reasons for Allowance:

The prior arts of record do not teach or suggest, alone or in combination, **all** the limitations of the independent claims of the current invention (claims 1, 9, 19 and 24). Claims 1 and 9 references a "method for reducing memory latency in a multi-node architecture"; claims 19 and 24 references "a system and home node for responding to read requests in a multi-node architecture having plurality of nodes". The discussion of the reasons for

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allowance shall be directed to claim 1 in which the Examiner shall designate as the primary invention in this application; however, the reasons for allowance will also apply to all other indicated independent claims (claims 9, 19 and 24). The prior arts of record do not teach nor suggest a system and method for reducing memory latency in a multi-node architecture comprises issuing a memory read request from a requesting node; issuing a speculative memory read request from a coherence agent in response to the memory read request from the requesting node; receiving the speculative memory read request at a home node before results of a cache coherence protocol are determined; and initiating a read to memory at the home node to complete the speculative memory read request before results of the cache coherence protocol are received by the home node. In light of the foregoing, claims 1, 9, 19 and 24 of the present application are found to be patentable over the prior arts.

Claims 2-6, 8, 10-18, 20-23, 25-27 and 29 further limit the allowable independent claims 1, 9, 19 and 24. These claims are therefore allowable for the same reason as set forth above.

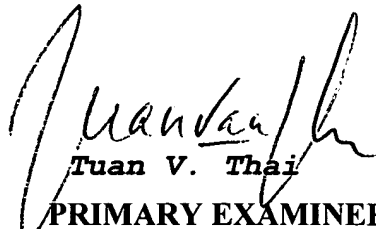
Any comments considered necessary by Applicant must be submitted no later than the payment of the Issue Fee and, to avoid processing delays, should preferably accompany the Issue Fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan V. Thai whose telephone number is (571)-272-4187. The examiner can normally be reached on from 6:30 A.M. to 4:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mathew M. Kim can be reached on (571)-272-4182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TVT/January 17, 2007


Tuan V. Thai
PRIMARY EXAMINER
Group 2100